

REMARKS

Claims 1-18 and 20-40 are pending in the present application. Claims 41-44 have been added with the present amendment. No new matter has been added. Claims 41 and 42 are supported, for example, by claim 7 as originally filed, and page 58, lines 7-8, which clarify that SEQ ID NO:1 is INAD. Claims 43 is supported by claim 12 as originally filed. Claim 44 is supported by Example 3, which illustrates that INAD associates with the recited signal transduction proteins. Applicants respectfully request entry of the Amendment and reconsideration of the pending claims in view of the remarks and amendments herein. Upon entry of the Amendment, claims 1-18, and 20-44 will be pending.

In response to the Restriction Requirement under 35 U.S.C. 121 and 372, and unity of invention rejection under PCT Rules 13.1 and 13.2, mailed December 19, 2002, Applicants elect, with traverse, Invention V (claims 14 and 15), Group I, SEQ ID NO:1 (INAD protein). Applicants respectfully request that claims 41-44 be Examined with the elected claims 14 and 15 since they depend from claim 14, and are directed at the same general inventive concept as claims 14 and 15. Applicants clarify that the election of SEQ ID NO:1 relates to the transducisome protein of element a of claim 14, and with the election the defective transducisome protein of element d is a defective version of the protein of SEQ ID NO:1.

In a unity of invention rejection, the Examiner must explain why each group lacks unity with each other group (MPEP 1893.03(d)). The basic principle of unity of invention is that a single national stage patent application should relate to inventions that are so linked as to form a single general inventive concept (*Id.*). A group of inventions is considered linked to form a single general inventive concept where there is a technical relationship among the inventions that involves at least one common or corresponding special technical feature (*Id.*). Such a feature defines the contribution of a claimed invention over the prior art (*Id.*).

Applicants traverse the restriction requirement related to the 17 Inventions cited in the Office Action, and most particularly with respect to Inventions V and VI. The Office Action

asserts that inventions I-XVII do not relate to a single general inventive concept under PCT Rule 13.1 because they allegedly lack "a single structure and function." This rationale is insufficient with respect to stating the particular reason for explaining a lack of unity rejection per MPEP § 1893.03 and MPEP § 816, especially in view of inventions V and VI. For example, claims 14-15 (Invention V) and 16-18 and 20 (Invention VI) recite methods for identifying modulators of signal transduction, that include the same structures (i.e. a signal transduction protein and a polynucleotide encoding a transducisome protein (see below)) and the same function (i.e. the transducisome protein functionally binds to the signal transduction protein to permit or enhance signal transduction). Therefore, the explanation given for restricting claims 14 and 15 from claims 16-18 and 20 is insufficient to meet the rules set out above that the Patent Office has established for unity of invention rejections (MPEP § 1893.03).

The inventions of claims 14-18 and 20 relate to a single, general inventive concept, and therefore these claims should be examined together in the present application. Inventions V (claims 14 and 15) and VI (claims 16-18 and 20), are directed at methods for identifying modulators of signal transduction. Independent claim 14, from which claim 15 depends, and independent claim 16, from which claims 17-18 and 20 depend, both recite a method for identifying modulators of signal transduction that involves contacting a cell with a test chemical, wherein the cell includes at least one signal transduction protein and a polynucleotide encoding a transducisome protein that functionally binds to the signal transduction protein to permit or enhance signal transduction. These elements correspond to a special technical feature of these claims. Therefore, inventions V and VI form a single general inventive concept, and should be examined together in the present application.

Furthermore, Applicants submit that a search relevant to the method of Invention V would identify references relevant to the method of Invention VI as well. This is based on the single general inventive concept of these claims, as discussed above. Therefore, it would not constitute an undue burden to examine the methods of claims 14-18 and 20 together. In fact, examining together methods of Invention V and Invention VI would prevent a duplicative effort

on the part of the U.S. Patent and Trademark Office. Searching the method of claim 14 for example, would result in identifying art related to any of the methods of claims 15-18 and 20. Therefore, independent searches related to either Invention V or Invention VI, would identify similar if not identical art.

In addition to requiring an election of one of the 17 inventions listed in the Restriction Requirement, the Office Action asserts that transducisome proteins differ in structure and function. Therefore, the Office Action asserts that if Applicants traverse the restriction requirement with respect to a single sequence, that Applicants should choose a single sequence for search. Furthermore, the Office Action asserts that this is not a species election.

As indicated above, Applicants elect with traverse the transducisome protein of SEQ ID NO:1. Applicants traverse the rejection because the disclosed transducisome proteins share a common structure and function with respect to the methods of claims 14-18 and 20. The transducisome proteins used in the methods of claims 14-18 and 20 share a structural feature in that they include a PDZ domain (Page 19, lines 8-10). Furthermore, they share a functional feature in that they permit or enhance signal transduction by binding directly or indirectly to a signal transduction protein. Therefore, transducisome proteins of the pending application should be Examined together.

Furthermore, the methods of claims 14-18 and 20 should be examined with respect to transducisome proteins in general, because these claims share the same general inventive concept regardless of the particular transducisome protein employed in the method. Independent claim 14, from which claim 15 depends, and independent claim 16, from which claims 17-18 and 20 depend, both recite a method for identifying modulators of signal transduction that involves contacting a cell with a test chemical, wherein the cell includes at least one signal transduction protein and a polynucleotide encoding a transducisome protein that functionally binds to the signal transduction protein to permit or enhance signal transduction. These elements correspond to a special technical feature of these claims without reciting a particular transducisome protein, because transducisome proteins share the same function in these methods. Therefore, methods of claims 14-18 and 20 form

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a single general inventive concept with respect to transducisome proteins in general, and therefore these claims should not be restricted to a single transducisome protein.

If the Examiner persists in requiring election of a single transducisome protein despite the remarks herein, Applicants request acknowledgement by the Examiner that the election of SEQ ID NO:1 is a species election from a genus of transducisome proteins. The recited transducisome proteins contain a PDZ domain and bind at least one signal transduction protein (Page 19, lines 8-10). Therefore, upon allowance of methods of the present invention that include SEQ ID NO:1, these methods should be further searched with respect to other transducisome proteins such that the methods are not limited to the transducisome of SEQ ID NO:1.

In view of the amendments and the above remarks, it is submitted that the claims are in condition for allowance and a notice to that effect is respectfully requested. The Examiner is invited to contact Applicant's undersigned representative if there are any questions relating to this application. Please charge any additional fees, or make any credits, to Deposit Account No. 50-1355.

Respectfully submitted,

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